

REMARKS

In the above-identified Office Action all of the pending claims were again rejected as being anticipated or obvious in view of the cited Isogai patent wherein the previous rejections were copied verbatim except that element 12 is now relied upon in Isogai, as well as element 18, as the second semiconductor. Also, in the latest Office Action, the rejections were amplified by a paragraph on page 5 thereof entitled “Response to Arguments”.

In this regard, Applicants respectfully submit that the rejections are improper in that they rely on element 12 of Isogai as the second semiconductor region of Claim 1, which region accumulates carriers, and then also rely on element 18 of Isogai as the same second semiconductor region which is claimed as being connected by the wiring to a circuit element outside the pixel region. Accordingly, Applicants previous arguments correctly overcome the rejections of Claim 1, wherein Applicants stated that Isogai does not disclose a sensor wherein the wiring is connected electrically to the second semiconductor region. Instead, if the second semiconductor is equated to the element 12 in Isogai, it must be understood that element 12 is not connected to the wiring as claimed, and if the second semiconductor is equated to the element 18 in Isogai, it must be understood that element 18 does not perform the claimed requirement for accumulating charges. That is, region 18 is shielded by region 24 and does not receive light.

In addition, independent Claim 1 has been amended to clarify even more emphatically that the wiring is connected directly to the second semiconductor regions, unlike element 12 in Isogai.

Accordingly, Isogai discloses neither the wiring connected electrically and directly to the region 12 forming the photodiode and connecting it electrically to the circuit element, nor “a conductor maintained at a predetermined potential and disposed over one side of the wiring within the pixel region, wherein an insulator is inserted between the conductor and said wiring so that the conductor does not contact said wiring, and the one side of the wiring is opposite to a side of the wiring at which the wiring is connect to the second semiconductor region”. Both of the above features are incorporated in amended claim 1.

Moreover, even if the wiring 23 in Fig. 2 of Isogai were connected directly to the photodiode and the wiring 24 were also connected directly thereto, since the wiring 24 is maintained at a fixed potential, no signal can be read out therefrom.

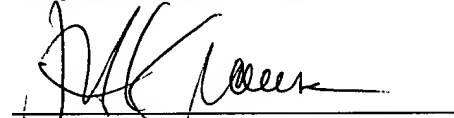
In accordance with the present invention, in order to prevent an adverse effect (due to external noise) on the wiring for reading out a signal connected directly to the photodiode, the conductor maintained at a predetermined potential is disposed over the wiring through the insulator inserted therebetween so as not to directly and electrically connect the conductor to the wiring.

It is to be understood that, according to the present invention, in a sensor structure of a type wherein an area storing a photo generated carrier in a floating state is formed, and wherein wiring is connected directly to the area for reading a signal, a technical problem is solved to overcome low frequency noise such as a radiation noise. No such problem is recognized or solved by Isogai.

For these various reasons Applicants respectfully submit that amended independent Claim 1 and all of its dependent claims are allowable. Accordingly, the issuance of a Formal Notice of Allowance is solicited.

Applicants' undersigned attorney may be reached in our New York office by telephone at (212) 218-2100. All correspondence should continue to be directed to our below listed address.

Respectfully submitted,

A handwritten signature in black ink, appearing to read 'J. A. Krause', is written over a horizontal line.

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